

Translation

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 2003P07168WO	FOR FURTHER ACTION	See Form PCT/IPEA/416																								
International application No. PCT/EP2004/005826	International filing date (<i>day/month/year</i>) 28.05.2004	Priority date (<i>day/month/year</i>) 06.06.2003																								
International Patent Classification (IPC) or national classification and IPC 																										
Applicant SIEMENS AKTIENGESELLSCHAFT																										
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of 5 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> <p>4. This report contains indications relating to the following items:</p> <table style="margin-left: 20px; border-collapse: collapse;"> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. I</td> <td>Basis of the report</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. II</td> <td>Priority</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. III</td> <td>Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. IV</td> <td>Lack of unity of invention</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td>Box No. V</td> <td>Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VI</td> <td>Certain documents cited</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VII</td> <td>Certain defects in the international application</td> </tr> <tr> <td><input type="checkbox"/></td> <td>Box No. VIII</td> <td>Certain observations on the international application</td> </tr> </table>			<input checked="" type="checkbox"/>	Box No. I	Basis of the report	<input type="checkbox"/>	Box No. II	Priority	<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability	<input type="checkbox"/>	Box No. IV	Lack of unity of invention	<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement	<input type="checkbox"/>	Box No. VI	Certain documents cited	<input type="checkbox"/>	Box No. VII	Certain defects in the international application	<input type="checkbox"/>	Box No. VIII	Certain observations on the international application
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Date of submission of the demand	Date of completion of this report																									
Name and mailing address of the IPEA/EP	Authorized officer																									
Facsimile No.	Telephone No.																									

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/EP2004/005826

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:

- international search (Rule 12.3 and 23.1(b))
- publication of the international application (Rule 12.4)
- international preliminary examination (Rule 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on (*replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report*):

the international application as originally filed/furnished
 the description:

pages 4-7 as originally filed/furnished
 pages* 1-3, 3a received by this Authority on 11.07.2005 with letter of 08.07.2005
 pages* _____ received by this Authority on _____

the claims:

nos. _____ as originally filed/furnished
 nos.* _____ as amended (together with any statement) under Article 19
 nos.* 1, 2 received by this Authority on 11.07.2005 with letter of 08.07.2005
 nos.* _____ received by this Authority on _____

the drawings:

sheets 1/1 as originally filed/furnished
 sheets* _____ received by this Authority on _____
 sheets* _____ received by this Authority on _____

a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. The amendments have resulted in the cancellation of:

the description, pages _____
 the claims, nos. 3, 4 _____
 the drawings, sheets/figs _____
 the sequence listing (*specify*): _____
 any table(s) related to sequence listing (*specify*): _____

4. This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

the description, pages _____
 the claims, nos. _____
 the drawings, sheets/figs _____
 the sequence listing (*specify*): _____
 any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/EP2004/005826

Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
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1. Statement

Novelty (N)	Claims	<u>1, 2</u>	YES
	Claims	_____	NO
Inventive step (IS)	Claims	<u>1, 2</u>	YES
	Claims	_____	NO
Industrial applicability (IA)	Claims	<u>1, 2</u>	YES
	Claims	_____	NO

2. Citations and explanations (Rule 70.7)

1. Reference is made to the following documents:

D1 : EP-A-1 022 702 (EATON CORPORATION)
 26 July 2000
 D2: US-A-4 237 454 (MEYER ET AL)
 2 December 1980
 D3: DE 199 47 129 A1 (SIEMENS AG)
 5 April 2001.

2. Document D1 is considered to be the prior art closest to the subject matter of claim 1. Said document discloses an acoustic receiver with the features of the preamble of claim 1.

2.1 The subject matter of claim 1 therefore differs from the known acoustic receiver in that a duplexer is used to split the electrical measuring signal into an evaluation signal and a supply signal, each thereof being in a different frequency range.

2.2 The subject matter of claim 1 is therefore novel (PCT Article 33(2)).

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2.3 The problem addressed by the present invention can consequently be regarded as that of optimising the use of the acoustic receiver measurement signal.

2.4 The solution to the above problem, as proposed in claim 1 of the present application, involves an inventive step (PCT Article 33(3)). The reasons are as follows:

the receiver known from D1 compensates the electrical oscillations prior to evaluation and, in consequence, has only the absolute voltage level as a measure of the oscillation energy.

By contrast, the solution according to the invention, makes it possible to analyse oscillations in a frequency range (evaluation signal), that is to say oscillation mode and amplitude for example. The duplexer has a synergetic effect therein: in that it rids the evaluation signal of undesired frequencies (also, for example, incident radiation from mains power lines) and, secondly, it splits the supply signal - as is required for the autonomous operation of the receiving unit. In this way, an extra acoustic receiver (as in D2) for producing the operating voltage is no longer required.

Neither D1 nor D2 contains anything to suggest the solution according to the invention. Although D3

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Box No. V **Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

uses evaluation signals only in specified frequency ranges, it also uses high-pass or band-pass filters but does not describe either an operating voltage supply or a duplexer.

2.5 Claim 2, being a dependent claim, likewise satisfies the requirements of PCT Article 33.